

Job Crafting as Reaction to Organizational Change

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Acknowledgements:

The first author would like to thank Roberta (Bobbie) Iversen, Matthew Steinberg, and Amy Wrzesniewski as well as the MMM Writing Group, who have been an incredible source of inspiration and encouragement during the writing of this piece. The first author also sincerely thanks the members of the research project Inclusive Education at the University of Applied Sciences Osnabrück (Germany) for their support during this project.

This is the author's manuscript of the article published in final edited form as:

Walk, M., & Handy, F. (2018). Job Crafting as Reaction to Organizational Change. *The Journal of Applied Behavioral Science*, 54(3), 349–370. <https://doi.org/10.1177/0021886318777227>

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Abstract

Change recipients are not just negative and passive, but positive and active shapers of organizational change; we draw on job crafting to reflect positive and proactive behaviors individuals display in their changing work environment. Drawing on job crafting and organizational change theory, this study proposes a conceptual framework that links change-specific context factors to job crafting as a form of change proactivity. These factors provide the impetus for change recipients to engage in job crafting; a relationship that is moderated by individual differences and situational factors. Job crafting is also related to organizational and individual outcomes. We test these relationships using data collected from teachers shortly after a major policy change was announced in Germany's public education sector. This study provides new insights into the antecedents and outcomes of job crafting, while offering a positive framing of change recipients as positive and active shapers during organizational change.

Keywords: organizational change, job crafting, change proactivity, change recipients, reactions to change

Organizational change has become an integral part of work organizations across sectors, given the complex, uncertain, and at times contradictory environment in which they operate. As only about 30% of change initiatives are successful (Aiken & Keller, 2009), academic and practitioner audiences continue to search for ways to improve this statistic. How individuals react to organizational change has recently been identified as vital avenue for further investigation since they carry the main responsibility for change implementation (Bartunek, Rousseau, Rudolph, & DePalma, 2006; Oreg, Vakola, & Armenakis, 2011).

When thinking about potential reactions to organizational change, resistance is oftentimes the first thing that comes to mind. It is therefore no surprise that resistance has been the dominant framing for organizational change research (Oreg et al., 2011). Resistance to change—defined as commitment to the current state (Armenakis, Harris, & Feild, 1999)—is regarded as a critical factor for the success or failure of change implementation (Armenakis, Harris, & Mossholder, 1993; Piderit, 2000). However, the resistance to change construct has also been criticized as ascribing individuals purely negative attitudes toward change (Amis & Aïssaoui, 2013). We know that change recipients reactions are not exclusively negative but that they can be positive (Oreg, Bartunek, Lee, & Do, 2018).

This preoccupation with valence—the extent of which recipient reactions are positive or negative—has meant that past research and theorizing has overlooked change recipients level of activation—the extent of which their reactions to change are active versus passive (Oreg et al., 2018). As recipient responses are more diverse than reflected in previous research, Oreg and colleagues (2018) proposed to map reactions along the two dimensions of valence and activation resulting in four potential reactions to change: change resistance (high activation/negative valence), change disengagement (low activation/negative valence), change acceptance (low activation/positive valence), and change proactivity (high activation/positive valence).

This paper answers the call for more research outside of resistance (Oreg et al., 2018) and

particularly focuses on the combination of positive valence and high activation. We propose that job crafting—a bottom-up approach to work redesign—can further our understanding of change proactivity as reaction to change. Job crafting—defined as the physical and cognitive changes individuals make in the task, relational or cognitive boundaries of their work (Wrzesniewski & Dutton, 2001)—is positive in valence as it emphasizes positive workplace behavior (Cameron & McNaughtan, 2014; Wrzesniewski & Dutton, 2001) and high in activation as it ascribes individuals a distinctly active role (Berg, Dutton, & Wrzesniewski, 2013; Oldham & Hackman, 2010). Therefore, job crafting is a fitting representation of change recipient reactions to change in the change proactivity quadrant (Oreg et al., 2018).

We draw on job crafting and organizational change theory to propose a conceptual framework that links change-specific context factors (i.e., perceived impact of change) to job crafting as form of change proactivity. We further theorize that individual differences (i.e., individuals' orientation towards work) and situational factors (i.e., opportunity to craft in the organizational context) additionally impact this relationship. Finally, we propose that job crafting is related to organizational (i.e., job satisfaction) and individual (i.e., burnout) outcomes. We test these relationships using data collected from elementary school teachers shortly after a major policy change was announced in the public education sector in Germany.

This paper contributes to the literature in several ways. First, we propose that job crafting is a valuable construct with significant potential to contribute to the emerging literature on change proactivity (Oreg et al., 2018), but currently disregarded in organizational change research. By integrating job crafting into a framework capturing change-specific context factors, this paper provides a nuanced conceptualization of individual behavior during change that helps to understand how employees enact change as they see fit. Second, previous research has not yet fully explored the reinforcing role that individual differences and situational factors play with regards to change recipients' reactions to change (Oreg et al., 2011). As such, our conceptualization of the moderating

role of individual differences and situational factors on the relationship between change-specific context factors and recipient reactions further helps to expand the theoretical understanding in this area. Third, there is a need for more theory and research linking job crafting to subsequent outcomes, especially to better understand when potential negative side effects of job crafting for individuals and organizations are most likely to occur (Berg et al., 2013; Oldham & Hackman, 2010). Our conceptual framework, supported by the empirical findings, help to further illustrate conditions in which job crafting is positive and conditions in which job crafting is negative.

Conceptual Framework and Hypothesis Development

Drawing on job crafting and organizational change theory and research, we propose and test a conceptual framework of job crafting as form of change proactivity (see figure 1). We introduce the model and our hypotheses below.

-INSERT FIGURE 1 ABOUT HERE-

Job Crafting as Reaction to Change

Job crafting is context dependent and likely to happen in situations when employees perceive a misfit between their needs and their current job design (Wrzesniewski & Dutton, 2001; Wrzesniewski et al., 2013). As such, job crafting is a type of proactive work behavior that enables employees to adapt to new work demands by changing aspects of their responsibilities at work (Berg, Grant, & Johnson, 2010; Griffin, Neal, & Parker, 2007). Adapting to work demands is especially vital in situations of organizational change, because organizational change frequently implies reorganization, requiring flexibility and openness from employees (Leana & Barry, 2000). As job crafting tends to occur in situations when individuals are trying to make sense of their work roles (Weick, 1995), it is very likely to occur during organizational change. Organizational change, may be seen as an adverse situation that “contribute[s] to pressure for employees to stay in less than ideal jobs for longer periods of time, making it more likely that employees will need to re-engineer their jobs from within as a way to find increased meaningfulness” (Berg et al., 2013, p. 85).

Employees facing organizational change may experience a need to regain control over the job and make meaning of their (changing) work, which is a major motivational factor for job crafting (Wrzesniewski & Dutton, 2001). In cases of a misfit between the work situation and the need for control, employees are more likely to engage in job crafting than in situations where the need for control is met (Wrzesniewski & Dutton, 2001).

The organizational change literature has also focused on the loss of job control as impetus for change recipients' reactions to change (Oreg et al., 2011). Particularly, this literature proposes that change recipients undergo an appraisal process when faced by organizational change in which they evaluate the potential personal impact of the change (Oreg et al., 2018). The extent of which change recipients perceive the changes as impacting them personally, in beneficial or harmful ways, then, plays an influencing role in their decision-making of whether to support or resist the change (Oreg et al., 2011) and whether to be active or passive in their responses (Oreg et al., 2018). Since change recipients' perceptions of the impact of the specific organizational change is a key determinant for recipient reactions (Oreg et al., 2011), we include this in our conceptual model (see Figure 1).

Moderators of the relationship between perceived impact of change and job crafting

Employees in many work organizations have substantial freedom to customize, modify, and craft their jobs (Oldham & Hackman, 2010). This freedom depends on individual differences and situational factors influencing the magnitude and nature of job crafting and subsequent outcomes (Griffin et al., 2007; Wrzesniewski & Dutton, 2001). To be more specific, Wrzesniewski and Dutton (2001) proposed individual differences such as individual orientation towards work and situational factors such as perceived opportunities to job craft in the organizational context as moderating variables. Organizational change research, similarly, has pointed scholars to further explore interrelationships between prechange antecedents—which are defined as factors independent of the specific organizational change and consist of both individual differences as well as situational factors (Oreg et al., 2011)—and recipient reactions to change (Oreg et al., 2011). Whereas much is known

about the direct relationship between both prechange antecedents and change-specific antecedents and recipient reactions to change, it is unclear to what extent individual differences and situational factors moderate the relationship between change-specific antecedents and reactions to change. To test the influence of moderating factors, we adopt Wrzesniewski and Dutton's (2001) conceptualization and examine two moderating effects—calling orientation as individual difference and quality of communication as situational factor—we posit that these factors will impact the relationship between perceived impact of the change and job crafting.

Moderating Role of Individual Work Orientations

Job crafting theory proposes that an individual's work orientation can impact the relationship between motivation for job crafting and job crafting behavior (Wrzesniewski & Dutton, 2001). Work orientations describe individuals' beliefs about the purpose and significance of their work (Bellah et al., 1985; Wrzesniewski et al., 1997). Previous research distinguishes three types of work orientations—job, career, and calling—which are prevalent in a wide range of occupations (Bellah et al., 1985; Wrzesniewski et al., 1997). This paper focuses on calling orientation, because teachers—the target population in this study—tend to be calling-oriented (Serow, 1994). Individuals with a calling orientation regard work as an end in itself; work, for them, serves a purpose of achieving common good and to give back to society (Bellah et al., 1985; Wrzesniewski et al., 1997). Calling-oriented employees are more likely to be engaged in their work, invest a lot of time in their work, and view work as central component of their lives (Wrzesniewski et al., 1997). Calling has been studied as antecedent to job crafting (Leana, Appelbaum, & Shevchuk, 2009), but—following Wrzesniewski & Dutton (2001)—scholars increasingly encourage research to conceptualize calling as moderator (Elangovan, Pinder, & McLean, 2010; Duffy & Dik, 2013; Hall & Chandler, 2005). Since calling-oriented employees are more likely to engage in job crafting (Fried et al., 2007; Wrzesniewski &

Dutton, 2001), we expect that calling orientation further strengthens the relationship between perceived impact of change and job crafting. We therefore hypothesize:

H1: Calling orientation will impact the relationship between perceived impact of the change and job crafting. Specifically, the relationship between perceived impact of change and job crafting will be stronger for employees who are high in calling than for those who are low in calling.

Moderating Role of Perceived Opportunity to Job Craft

Aside from individual differences, situational factors such as perceived opportunities to craft within the organization may also impact change recipient job crafting behavior (Wrzesniewski & Dutton, 2001). As such, job crafting is more likely to occur if the organizational context is generally supportive of or amenable to job crafting. For instance, social ties at work—described as the quality of relationships with co-workers—has been found to positively contribute to job crafting behavior (Leana et al., 2009). Situational factors such as the organizational context also play an influential role during organizational change. Organizational context is generally conceptualized as prechange antecedent and unrelated to the specific organizational change (Oreg et al., 2011). Generally, employees who perceive the organizational context as supportive show higher willingness to implement the change (Oreg et al., 2011). Furthermore, Ghitulescu (2013) finds that organizational context such as social ties and discretion at work affect proactive change recipient behavior while also moderating the relationship between job demands and proactive workplace behavior. In addition, a positive communication climate has been found to predict employee readiness to change (Armenakis et al., 2007; Holt et al., 2007), which leads to higher post-change satisfaction (Covin et al., 1996). As the organizational context provides support for proactive behavior during change, we propose that organizational context, measured by quality of communication, moderates the impact of perceived impact of change on job crafting as positive and proactive reaction to change.

H2: Quality of communication will impact the relationship between perceived impact of the change and job crafting. Specifically, the relationship between perceived impact of the change and job crafting will be stronger for employees perceiving the quality of

communication in their organization as high compared to those who work in low quality of communication environments.

Job Crafting and Outcomes

Past research indicates that job crafting is related to key individual and organizational outcomes such as individuals' psychological well-being (Berg, Wrzesniewski, & Dutton, 2010), work engagement (Bakker, Tims, & Derks, 2012) as well as commitment, performance, and job satisfaction (Leana et al., 2009). However, the consequences of job crafting have not yet been fully explored (Oldham & Hackman, 2010). In this paper, we focus on burnout as an individual outcome and job satisfaction as an organizational outcome.

Job Crafting and Job Satisfaction

Job Satisfaction indicates the extent to which employees are pleased with their work and provides an evaluation of whether the job fulfills the individual's needs and values (Locke, 1976). Job satisfaction is a reliable predictor organizational performance (Judge et al., 2001), while job dissatisfaction predicts turnover (George & Jones, 1996). Job satisfaction has been the second most studied outcome in organizational change research (Oreg et al., 2011) and has also been included in job crafting research (Leana et al., 2009). In particular, Leana and colleagues (2009) who studied two types of job crafting—individual job crafting (job crafting done alone) as well as collaborative job crafting (job crafting done in collaboration with others), find a positive relationship between collaborative job crafting and job satisfaction but a negative relationship to individual crafting. Oreg and colleagues (2018) proposed that change proactivity generally leads to positive outcomes as reflected in positive attitudes and behaviors as well as higher well-being, as such, we propose that job crafting has positive impacts on job satisfaction.

H3: Job crafting is positively related to job satisfaction.

Job Crafting and Burnout

Burnout is a syndrome characterized by changes in emotions that manifest in depersonalization (or cynicism), diminished personal accomplishment (or a reduced sense of efficacy) and/or emotional exhaustion (Maslach, Jackson, & Leiter, 1986), leading to absenteeism and turnover (Martin, Sass, & Schmitt, 2012). Burnout is less prevalent in organizational change research (see Paulsen et al., 2005 for an exception) and job crafting research (Berg et al., 2013). Studies on proactivity more generally, however, indicate a negative relationship between individuals' proactive workplace behavior and burnout among teachers (Pietarinen, Pyhältö, Soini, & Salmela-Aro, 2013; Schwarzer, Schmitz, & Tang, 2000); as such, proactive workplace behavior is related to reduced levels of burnout. As burnout is an important outcome with potential detrimental effects for individuals, we expect job crafting, a positive and proactive workplace behavior, to be negatively associated with burnout. Employees who engage in job crafting to achieve a better fit between their own needs and their job might, in fact, do so to protect themselves from burnout and its consequences.

H4: Job crafting is negatively related to burnout.

Methods

This paper is part of a larger study that adopted a nested, sequential, mixed methods design, which has the ability to uncover and subsequently test emergent hypotheses (Small, 2011). Job crafting emerged as proactive and positive reaction to change during the qualitative phase (20 in-depth interviews from members of the same population) and, thus, we integrated a job crafting measure on the survey instrument to capture this reaction to change more widely. Qualitative follow-up interviews where survey findings were shared and discussed formed the last stage of the overall study design. This paper uses the survey data to test the hypotheses.

Setting

This study investigates teachers' responses to a new education policy—the implementation of inclusive education in German elementary schools—which brings along fundamental changes in work tasks, relationships at work, and the overall work environment (author cite). Inclusion implies the reorganization of mainstream schooling and emphasizes that every school should accommodate all children with their diverse needs, ensuring comprehensive participation regardless of individual differences (Avramidis & Norwich, 2002). Introducing inclusive education provokes significant workplace change for general education teachers (GET), who must rethink their roles. Their previous teacher-centered approaches, with the main task being to pass on knowledge, needs revision as inclusive classrooms emphasize learner-centered approaches, where the teacher is seen as a mentor and companion (Polly & Hannafin, 2011). Inclusive education also brings changes for special education teachers (SET) who no longer spend their work hours at a special needs school, but are assigned to two to three elementary schools where they predominately work with individual students, only sometimes co-teaching with GET (author cite). Thus, SET lose their roles as traditional teachers with home classrooms and GET find their traditional ways of teaching are challenged in inclusive classrooms.

Both teacher groups play a critical role in the successful implementation of inclusive education (Soodak, Podell, & Lehman, 1998). However, if they perceive that the inclusive education profoundly changes their work and the work environment, teachers might be compelled to react to these changes. As teachers have substantial autonomy in their own classroom (Lortie, 1969)—a feature deemed necessary to spark job crafting (Wrzesniewski & Dutton, 2001)—teachers, we posit, are likely to engage in job crafting to improve their job satisfaction and mitigate threats of burnout. Indeed, we found that teachers engaged in positive and proactive efforts as reaction to the change during the qualitative component of the larger study (author cite). Triggered by the perceived impact of the change, teachers adapted class sizes, engaged in additional training at their own expense, and

consulted professional literature without being required to do so. We reason that teachers engaged in these job crafting behaviors in order to lower the perceived burden of the organizational change and to ease change implementation.

Data Collection

Data were collected in April 2014 shortly after the policy implementation (effective as of academic year 2013/2014), providing an opportune moment to study responses to organizational change. Using a census approach of elementary schools in one city and district in Lower Saxony, Germany (N=111), all teachers working in these schools were invited to participate. The survey instrument was administered as mailed paper-and-pencil survey. Teachers (n=489) from 71 schools participated (no information on total number of teachers was available to calculate response rates), whereby cluster size varies from 1 to 21 with an average size of 6.5. Most of the teachers were GET (88%) and the sample was largely female (93%) with an average age of 46.

Measuresⁱ

Individual Work Orientation: Following Wrzesniewski and colleagues (1997), individual work orientation was assessed using the 15 item work orientation scale consisting of three dimensions: calling, job, and career (5-point Likert scale; 1=not at all to 5=very much). Calling and job dimensions are often inversely related (Wrzesniewski, 1999; Wrzesniewski et al., 1997), therefore, we used the 5 items from the calling and the 5 items from the job scale (reverse-coded) to form the calling measure. Four items were deleted during confirmatory analysis due to low multiple r^2 ($<.10$; Hooper, Coughlan, & Mullen, 2008)ⁱⁱ. The remaining items reached an internal consistency of $\alpha=.72$.

Opportunity to Craft in the Organizational Context: To operationalize perceived opportunity to craft in the organizational context, we used a four item Quality of Communication instrument (Gerecht et al., 2007) assessing communication between principal and teachers (e.g., “The tone

between principal and teachers is friendly”; $\alpha=.89$) on a 6-point Likert scale (1=strongly disagree to 6=strongly agree).

Perceived Impact of Change: To reflect perceptions of the personal impact of the change, we developed a measure called Impact of Change on the Teaching Profession. Nine items (e.g., “The work demands for elementary school teachers are increasing due to the implementation of inclusive education”; “The implementation of inclusive education demands more mobility and flexibility from special education teachers.”) pertaining to changes for both GET and SET were developed based on previous qualitative research (author cite). Items were measured on a 6-point Likert scale (1=strongly disagree to 6=strongly agree) and four items were reverse-coded before analysis; all items tap onto perceived harm (not benefits) of the changeⁱⁱⁱ.

Job Crafting: Job crafting behavior was measured using 11 items (Wrzesniewski, personal communication). To reflect the particular context, we added two items reflecting teachers’ proactive and positive responses to organizational change (e.g., “I look for literature that informs my work”, “I try to attend professional trainings that help me with my work”). Job crafting was assessed on a 7-point Likert scale (1=strongly disagree to 7=strongly agree). Exploratory and confirmatory factor analyses^{iv} revealed a two-factor solution consisting of Internal Job Crafting (6 items, e.g., “I try to change the purpose or mission of my role at my school”, $\alpha=.88$) and Structural Job Crafting (4 items, e.g., “I try to attend professional workshops/trainings that help me with my work”, $\alpha=.73$). Internal Job Crafting consists of items that pertain to actions within the person that tend to capture cognitive responses. Items on Structural Job Crafting relate to actions that require interaction with the environment; items on this factor tend to capture behavioral responses. The factor solution as well as items, factor loadings, item-total correlations, and internal consistencies are shown in Table 1.

-INSERT TABLE 1 ABOUT HERE-

Organizational Outcomes: Job satisfaction was operationalized using the 5-item version of the Brayfield and Rothe (1951) measure (e.g., “I feel fairly satisfied with my present job”, $\alpha=.70$). Items were assessed on a 5-point Likert scale (1=strongly disagree to 5=strongly agree).

Individual Outcomes: Burnout was assessed using the German version of the Maslach Burnout Inventory (Jerusalem et al., 2009). This 9-item scale has three dimensions, with items assessed on a 5-point Likert scale (1=strongly disagree to 5=strongly agree): Emotional exhaustion (e.g., “I feel emotionally drained from my work”, $\alpha=.82$), depersonalization (e.g., „I worry that this job is hardening me emotionally”, $\alpha=.70$) and lack of accomplishment (e.g., “I deal very efficiently with the problems of my students“, reverse-scored, $\alpha=.67$).

Control Variables: We control for teaching profession (GET = 1, SET = 0) as SET tend to have more positive attitudes toward inclusion, the specific change content (Avramidis & Norwich, 2002). We also control for tenure with the current school (in years) as this may impact individuals job crafting behavior (Niessen, Weseler, & Kostova, 2016).

Analysis

Prior to hypothesis testing, we performed CFA to assess model fit of the proposed 9-factor model including all survey-based constructs (Impact of Change on Profession, Quality of Communication, Calling, Internal and Structural Crafting, Job Satisfaction, Emotional Exhaustion, Depersonalization, and Lack of Accomplishment). According to RMSEA =.05 and SRMR =.06, the model fit was good. Even though CFI = .88 and TLI =.87 fell short of suggested criteria for good fit ($>.95$; Hu & Bentler, 1999), model fit indices were comparable to other studies in calling and job crafting research (Bunderson & Thompson, 2009; Leana et al., 2009; Hirschi, 2012). We also ran unconditional models (null model) to estimate the total systematic variance in the outcome variables (job crafting, burnout, satisfaction). Intraclass correlation coefficients ($ICC<.1074$) indicated that the analytic model does not need to account for interdependence of the data (Hox, 2010). Data were

analyzed using structural equation modeling based on maximum likelihood estimation while accounting for missing data using Stata 15.

Findings

Descriptive Statistics. As presented in table 2, teachers average job satisfaction and their calling orientation were high. Levels of structural job crafting were higher as compared to internal job crafting. Impact of the change on the teaching profession was perceived as profound as indicated by the high mean value. Mean scores for all burnout dimensions were below, but close to the mid-point. A few correlations are also of note (Table 3). Calling is positively correlated with structural job crafting ($r=.21, p\leq.0001$) but not with internal job crafting ($r=.08, p=.09$). Both teacher groups show the same inclination to craft their jobs, despite the different challenges they face during change implementation^v. Moreover, impact of change on the profession is negatively related to internal crafting ($r=-.12, p=.015$) and structural crafting ($r=.10, p=.046$), implying that change recipients tend to craft less the more harmful they perceive the impact of the changes to be.

-INSERT TABLE 2 & 3 ABOUT HERE-

Hypothesis testing. We hypothesized that the relationship between perceived impact of change and job crafting is moderated by quality of communication and calling orientation. As displayed in table 4, we find that calling orientation significantly moderates the relationship between impact of the change on the profession and structural job crafting ($\beta =-.21, p=.038$). Since the impact of change is negatively related to job crafting—the more severe the perceived impact of change, the less likely individuals are to engage in job crafting—the negative coefficient of calling does serve as buffer and ultimately strengthens the relationship between perceived impact of change and structural job crafting. Quality of communication was not a significant moderator, contrary to our expectations ($\beta =.00, p=.97$). However, we find that quality of communication significantly moderates the relationship between impact of the change on the profession and internal job crafting ($\beta=.21, p=.010$). Since the impact of the change is negatively related to job crafting—the more severe the

perceived impact of change, the less likely individuals are to engage in job crafting—the positive coefficient of quality of communication weakens the relationship between perceived impact of change and internal job crafting. Calling was not a significant moderator of this relationship, although the coefficient approached significance ($\beta = -.24$, $p = .061$).

To examine the nature of the significant interactions, we follow recommendations by Preacher, Curran, and Bauer (2006). After standardizing all variables, we plotted regression lines representing the relationship between impact of the change on the profession and structural crafting by low and high calling (plotted at ± 1 SD below/above the mean). Figure 2 shows that the slope is steeper in case of low calling (simple slope $= .91$, $p = .05$) than in the case of high calling (simple slope $= .63$, $p = .06$) indicating that individuals high in calling who perceive the impact of the change as severe tend to engage in more structural crafting as compared to individuals low in calling. However, only the simple slope for the low calling condition is statistically significant ($p = .05$).

We applied the same procedure to represent the relationship between impact of change on the profession and internal job crafting by low and high quality of communication (± 1 SD below/above the mean). As can be seen in figure 3, the high quality of communication condition yielded a milder slope (simple slope $= -.90$, $p = .01$) than the low communication condition (simple slope $= -1.20$, $p = .02$). Teachers who perceive the impact of change to be high and enjoy high quality of communication in their schools, engage in less internal job crafting as compared to teachers in low communication environments.

Job crafting is significantly related to job satisfaction and burnout in interesting ways. First, we find that internal job crafting is negatively related to job satisfaction ($\beta = -.10$, $p = .003$) and positively to structural job crafting ($\beta = .15$, $p \leq .0001$; see table 4). Teachers who engage in internal crafting, capturing cognitive responses to organizational change, face reduced levels of job satisfaction, whereas teachers who engage in structural crafting, capturing behavioral responses to organizational change, face improved levels of job satisfaction. Furthermore, internal crafting is positively related to

two burnout dimensions; particularly, teachers who engage in internal crafting are more likely to experience heightened emotional exhaustion ($\beta = .10, p = .026$) and depersonalization ($\beta = .08, p = .007$). On the contrary, structural crafting is negatively related to all three burnout dimensions; teachers who engage in structural crafting tend to experience less emotional exhaustion ($\beta = -.13, p = .001$), depersonalization ($\beta = -.14, p \leq .0001$), and lack of accomplishment ($\beta = -.09, p = .012$).

-INSERT TABLE 4, FIGURE 2&3 ABOUT HERE-

Common Method Bias (CMB). Our findings might have inflated relationships between constructs due to common-method bias since data were collected from the same source at the same time (Podsakoff et al., 2003). We took an a priori approach towards CMB by integrating recommendations to mitigate CMB during survey development (Podsakoff et al. 2003, 2012). Specifically, we designed the survey instrument aiming to mitigate item characteristic and item context effects. Item characteristic effects are characterized by artificial covariance resulting from characteristics of the items such as common scale format and common scale anchors (Podsakoff et al. 2003, 2012). To mitigate this concern, we used different scale anchors as well as different scale formats^{vi}. Item context effects occur when the location of specific instruments within a survey may influence the respondents' interpretation of the instrument (Podsakoff et al., 2003). To minimize this concern, we dispersed measures related to this paper throughout the survey and asked participants to respond to unrelated measures (i.e., procedures for special needs diagnoses, experiences with inclusive education) in between. As such, we created proximal separation, deemed effective in mitigating CMB (Weijters, Geuens, & Schillewaert, 2009; Podsakoff et al., 2003, 2012). Moreover, we aimed to decrease the difficulty in responding by using clear language, defining unfamiliar terms, and labeling all scale points rather than just the end points (Podsakoff et al., 2012). Finally, CMB is less likely to occur when respondents are motivated to provide information (Podsakoff et al., 2012). Among the 489 surveys we received, 252 teachers (51.53%) filled out an open-response field on the last page of the survey asking them "Is there anything in relation to inclusive education, that is

important to you in addition to the above?’. Taking the time at the end of a lengthy survey to share additional information, we think, indicates motivation to provide information and, thus, offers additional support for a reduced likelihood of CMB in our data.

Discussion

Our findings extend previous theory and research on job crafting as positive (Cameron & McNaughtan, 2014; Wrzesniewski & Dutton, 2001) and proactive (Berg et al., 2013; Oldham & Hackman, 2010) workplace behavior, and therefore contributes to our understanding of change proactivity as reaction to organizational change (Oreg et al, 2018). Drawing on job crafting and organizational change theory and research, we integrate job crafting into a framework that captures change-specific context factors as well as individual differences and situational factors to increase our understanding of change recipient behavior during change. We further link job crafting to subsequent organizational and individual outcomes.

The job crafting scale, as adapted for this study, is a multidimensional measure with two related but distinct dimensions: internal and structural job crafting. Whereas internal job crafting captures cognitive reactions to change, structural job crafting reflects behavioral reactions to change. Our findings illuminate the reinforcing role that individual differences and situational factors play with regards to change recipients’ reactions to change (Oreg et al., 2011) by establishing two distinct mechanisms that link the impact of the change to internal and structural job crafting. First, we find that quality of communication as situational factor moderated the relationship between impact of the change and internal job crafting such that as the quality of communication decreases, the relationship between impact of the change and internal crafting weakened. Contrary to our expectations, teachers who perceived quality of communication to be low were more likely to engage in internal crafting as compared to those who perceived the quality of communication as high. As such, the organizational context did not strengthen but weaken the relationship between perceived impact of change and job crafting. Since internal crafting was negatively related to job satisfaction and positively related to

burnout, reducing internal crafting, however, may not necessarily be a bad thing. Given that internal crafting captures more cognitive responses to change, engaging in these efforts might be more demanding for individuals. Second, calling orientation moderated the relationship between impact of the change and structural crafting such that as an individual's calling orientation increases, the relationship between impact of the change and structural crafting increases. Moreover, and in contrast to internal job crafting, structural job crafting seems to be beneficial as indicated by the negative relationship to all burnout dimensions and the positive relationship to job satisfaction. This finding indicates that structural job crafting helps to mitigate negative effects of organizational change. Given the behavioral nature of structural job crafting, our finding implies that the environment may be more responsive to structural job crafting than internal job crafting efforts. Overall, these findings provide new insights into the potential benefits of structural job crafting and unanticipated adverse effects of internal job crafting (Berg et al., 2013) and reinforces and further illuminates the seminal work by Wrzesniewski and Dutton (2001) that posits that job crafting is neither fully positive nor negative but might have both positive and negative consequences.

Individuals affected by organizational change are frequently labeled 'change recipients' (Armenakis et al., 2007; Bartunek et al., 2006; Oreg et al., 2011; Oreg et al., 2018). But our findings support assertions by Oreg and his colleagues (2018) that responses to organizational change can come in different forms. Indeed, employees do not have to be recipients of change but can proactively engage with the changes while using them as an opportunity to shape their work environment. Since employees can be both recipients *and* shapers of change, we propose the term *change transceivers* to better capture the potential for passive (i.e., receiving) and active (i.e., transforming/shaping) as well as positive (i.e., supportive) and negative (i.e., resisting) roles during change.

Our study design and data collection approach that uses data collected from employees from 71 organizations during a large-scale policy change in the German education system, enables us to add

to the scarce empirical research across comparable organizations undergoing the same change (Oreg et al., 2011). Moreover, as we incorporate the organizational context into our conceptual model, we add to the scarce literature in this area (Everson & Millsap, 2004; Oreg & Berson, 2011).

This study has implications for practitioners. Considering the important role that work plays in individuals' lives and for their well-being (Rosso, Dekas, & Wrzesniewski, 2010), organization leaders should be aware of the potential effects that organizational change can pose for their employees. As such, leaders might want to be more attentive and responsive to employees' efforts in accepting, resisting, or proactively engaging with organizational change. Job crafting is only one potential reaction to organizational change; our study indicates that its outcome is complex. For example, as internal job crafting has negative relationships with individual and organizational outcomes, leaders might try to pay particular attention to the quality of communication that might mitigate such behavior. Moreover, as individuals' job crafting behavior depends on their perceived impact of the change, leaders might engage in conversations about the necessities for the change in order to improve buy-in from their employees. Overall, it is essential to take into consideration various individual, organizational as well as change-specific context factors and their interrelations to better understand change transceivers' reactions to organizational change.

Whereas this study has distinct strengths, it is not without limitations. First, similar to other studies on job crafting (Berg et al., 2010b; Leana et al., 2009), the cross-sectional nature of the data does not allow for causal claims. Given our theorizing, which is grounded in a comprehensive conceptual framework, reverse causality may not be a major concern. However, we cannot totally exclude the possibility that job crafting itself drives the effects; an alternative explanation might be that individuals undertaking job crafting do so due to an unobserved variable or as a way to cope with burnout and job dissatisfaction. Although the qualitative study gives some credence to our findings (author, cite), future studies might conduct longitudinal research to establish causality between the proposed relationships. Furthermore, this study focused on only two potential outcomes

of job crafting: burnout as an individual outcome and satisfaction as an organizational outcome. What is still unknown—but a potential other important outcome of job crafting—are other-related outcomes such as children in teachers' classrooms. As teachers are predominately calling-oriented (Serow, 1994), it may be that they try to make the change happen, because they are concerned with the children and not necessarily to improve their own well-being. This implies that employees would not only job craft to achieve a better fit of the altered job to their own needs, but also to their clients' needs. Integrating measurements that assess other-related outcomes into future research might help to further broaden our understanding of job crafting.

Our sample is representative of teachers in a particular city and district in Germany, thus might have limited generalizability with regards to the state, the country, or internationally. The variables we study, however, may be relevant to other organizations undergoing change as we have no a priori reason to think that the relationships would work differently in other organizational contexts with other calling-oriented employees, who have some autonomy to shape their work environments; although we encourage the replication of the findings in other contexts to further enhance generalizability.

Conclusion

This study provides a first attempt to study job crafting embedded into a conceptual framework of change transceivers' reactions to organizational change. Drawing on job crafting and organizational change theory, we proposed and tested a conceptual model linking the perceived impact of change—a change-specific context factor—to job crafting. This relationship was further influenced by individual differences (i.e., calling orientation) and situational factors (i.e., quality of communication). Job crafting, however, was not good in all circumstances; whereas structural job crafting was a protective factor for the occurrence of burnout and positively associated with job satisfaction, internal job crafting—in contrast—increased burnout and reduced job satisfaction. Still, studying job crafting as positive and proactive reaction to organizational change provides an

important step to increase our understanding of the various responses of change transceivers during organizational change (Oreg et al., 2018) and lays the groundwork for implications for practitioners planning and implementing organizational change.

ⁱ The first author translated measures from English into German; they were back-translated by a translating agency blind to the objectives of the study. The extended research team discussed both versions and adapted items, where deemed necessary.

ⁱⁱ Deleted items: “My work makes the world a better place”, “I view my job as just a necessity of life, much like breathing or sleeping” (RV), “When I am not at work, I do not think much about my work” (RV), “I never take work home with me” (RV).

ⁱⁱⁱ Exploratory common factor analysis (EFA) for impact of change on the profession and job crafting was conducted on a randomly split sample and confirmatory factor analysis (CFA) on the other half. Common factor analysis with squared multiple correlations as initial communality estimates were applied for the factor models rotated according to varimax, equamax, and promax criteria. Models were evaluated on the ability to satisfy Velicer's minimum-average partialing test and parallel factoring of normal random variables on the basis of 100 replications, retain at least 3 items with salient loadings ($>.40$), yield high internal consistency ($\alpha \leq .70$), remain invariant across models, produce the highest hyperplane count, and make theoretical sense while being parsimonious. For impact of change on the profession, the one-factor model was superior and satisfied all criteria, besides internal consistency $>.70$. Models with more factors produced factor scores with only two salient items. Salience was found for 6 of the 9 items and achieved internal consistency of .65 (drop from .69 of all items), slightly below the suggested cut-off (Nunnally & Bernstein, 1994). One item was dropped due to low multiple r^2 ($<.10$; Hooper, Coughlan, & Mullen, 2008). CFA indicated acceptable fit to the data (TLI=.85, CFI=.92, RMSEA=.10, SRMR=.04).

^{iv} For the job crafting scale, the two-factor promax rotated ($k = 5$) model was superior and satisfied all criteria. Models with more factors produced factor scores with unsatisfactory internal consistency or only two salient items. Salience was found for 10 of the 13 items. No item migrated to other factors during oblique, multiple-group, principal-components cluster analysis. The average item variance accounted for by the hypothesized factors was 4.36 times larger than that for the best alternative solution, providing additional support for the factor solution. Additional analysis using Wrigley–Neuhaus coefficients of congruence supported the factor structure indicating that the structure holds for sub-sets of the sample (available upon request from first author).

^v Additional ANOVAs confirm this result; teacher groups are not different in their levels of internal ($F(1, 435)=2.77, p=.10$) or structural job crafting ($F(1, 447)=.94, p=.33$).

^{vi} For instance, to measure calling we used a 5 point Likert scale ranging from 1=not at all to 5=very much, whereas we used a 6-point Likert scale ranging from 1=strongly disagree to 6=strongly agree to measure quality of communication.

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Figure 1: Conceptual Model

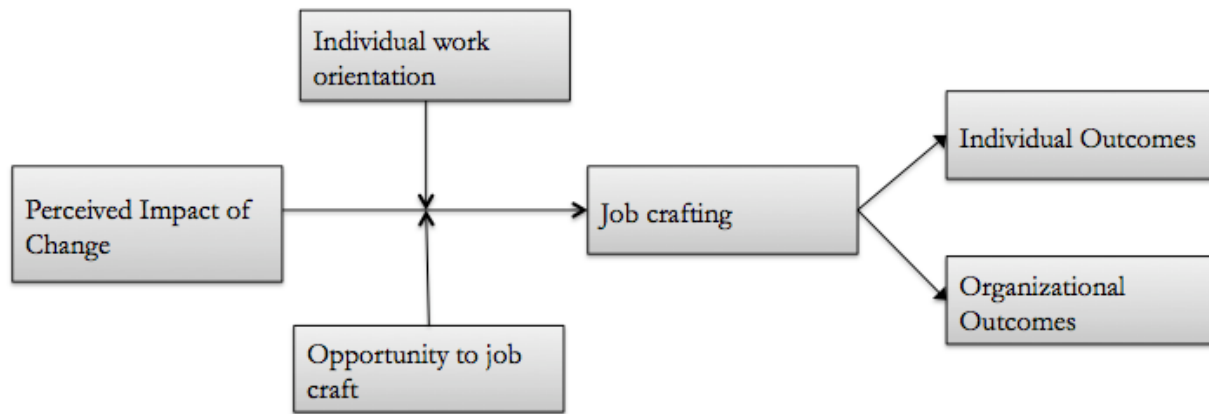


Table 2: Descriptive Statistics

	Range	n	M	SD
Profession (1=general education)	0-1	484	0.88	0.32
Tenure (in years)	.25-40	453	9.63	8.12
Calling	1-5	448	3.81	0.65
Quality of Communication	1-6	454	5.06	0.86
Impact of changes on teaching profession	1-6	434	4.74	0.6
Job Crafting				
a) Internal Job Crafting	1-7	440	4.58	0.98
b) Structural Job Crafting	1-7	454	5.18	0.83
Satisfaction	1-5	458	3.92	0.62
Burnout				
a) Depersonalization	1-5	465	1.61	0.55
b) Emotional exhaustion	1-5	468	2.37	0.8
c) Lack of accomplishment	1-5	465	2.41	0.56

Table 1 Dimensional Structure of Job Crafting Scale

Variable	EFA		Confirmatory oblique principal-components-cluster analysis			
	Equamax loading	Promax loading ^b	R ² with own factor ^c	R ² with next factor ^d	Structure loading	Item-total r ^a
Factor 1: Internal Job Crafting ($\alpha=.88$)						
I try to redefine what I am responsible for at my school.	0.77	0.82	0.72	0.11	0.85	0.78
I try to alter the procedures for doing my job.	0.71	0.71	0.67	0.14	0.82	0.71
I try to redefine the scope of my job responsibilities at my school.	0.81	0.87	0.74	0.11	0.86	0.82
I try to change the purpose or mission of my role at my school.	0.8	0.89	0.71	0.07	0.84	0.77
I try to change the way I go about doing my work and to institute new work goals.	0.73	0.74	0.65	0.21	0.80	0.75
I change the way I work with others in order to more effectively achieve my work goals.	0.52	0.45	0.43	0.24	0.66	0.61
Factor 2: Structural Job Crafting ($\alpha=.73$)						
I try to attend professional workshops that help me with my work.	0.64	0.74	0.52	0.04	0.72	0.55
I look for specialist literature that may help me with my work.	0.56	0.61	0.59	0.06	0.77	0.43
I try to introduce new structures or approaches that increase my efficiency.	0.62	0.57	0.58	0.31	0.76	0.44
I try to change rules or policies that are nonproductive or counterproductive for me.	0.56	0.56	0.52	0.12	0.72	0.45

Note: Entries are rounded to two decimals. EFA was performed on a random subsample of the data set (N=245) and confirmatory oblique principal-components-cluster analysis was performed on the second part of the sample (N=244). Items are abbreviated for convenient presentation.

a Values are Pearson product-moment-correlations, with the respective item excluded from total factor score

b Values are promax loadings (k=5) where hyperplane count is optimized, and which were estimated from an initial equamax structure

c R² for a item's own factor indicates the proportion of the variance explained by the other items in the hypothesized factor structure

d R² for an item's next factor indicates the variance explained by items in the next best factor

Table 3: Correlations

	1	2	3	4	5	6a	6b	7	8a	8b	8c
1. Profession (1=general education)	-										
2. Tenure	.23****	-									
3. Calling	0.05	-.08+	0.72								
4. Quality of Communication	0.02	0.08+	.09+	0.89							
5. Impact of Changes on Teaching Profession	.22***	.12*	-.19****	0.06	.65						
6. Job Crafting											
a) Internal Job Crafting	-.08+	-.11*	.08+	-.08	-.12*	.88					
b) Structural Job Crafting	-.04	-.03	.21****	-.11*	-.10*	.46****	.73				
7. Satisfaction	0.05	-.01	.61****	.29****	-.11*	-.05	.13**	.70			
8. Burnout											
a) Depersonalization	.08+	-.03	-.33****	-.05	.16**	0.04	-.15**	-.39****	.70		
b) Emotional exhaustion	.08+	.04	-.45****	-.10*	.23****	0.04	-.07	-.62****	.41****	.82	
c) Lack of accomplishment	.00	.01	-.25****	-.01	0.05	-.08	-.13**	-.39****	.31****	.26****	.67

Note: +p≤.10, *p≤.05, **p≤.01, ***p≤.001, ****p≤.0001. Values are rounded to two decimals. Internal consistency estimates on diagonal, where applicable.

Table 4: Estimated Regression Coefficients

	Job Crafting		Satisfaction	DP	Burnout EE	LA
	Internal	Structural				
Profession (1=GET)	-.19 (.15)	-.13 (.13)				
Tenure	-.01 (.01)	.00 (.01)				
Impact on profession	-.30 (.60)	.73 (.50)				
Calling	1.26 (.62)*	1.34 (.51)**				
Interaction (Impact on profession*Calling)	-.24 (.13)+	-.21 (.10)*				
Quality of Communication	-1.09 (.40) **	-.13 (.32)				
Interaction (Impact on Profession*Communication)	.21 (.08)**	.00 (.07)				
Internal Job Crafting	-	-	-.10 (.03)**	.08 (.03)**	.10 (.04)*	-.01 (.03)
Structural Job Crafting	-	-	.15 (.04) ****	-.14 (.03) ****	-.14 (.05) ***	-.09 (.04) *

Note: N= 489; coefficients rounded to two decimals; +p≤.10, *p≤.05, **p≤.01, ***p≤.001, ****p≤.0001. DP=Depersonalization, EE=Emotional Exhaustion, LA=lack of accomplishment

Figure 2: Moderating role of calling orientation

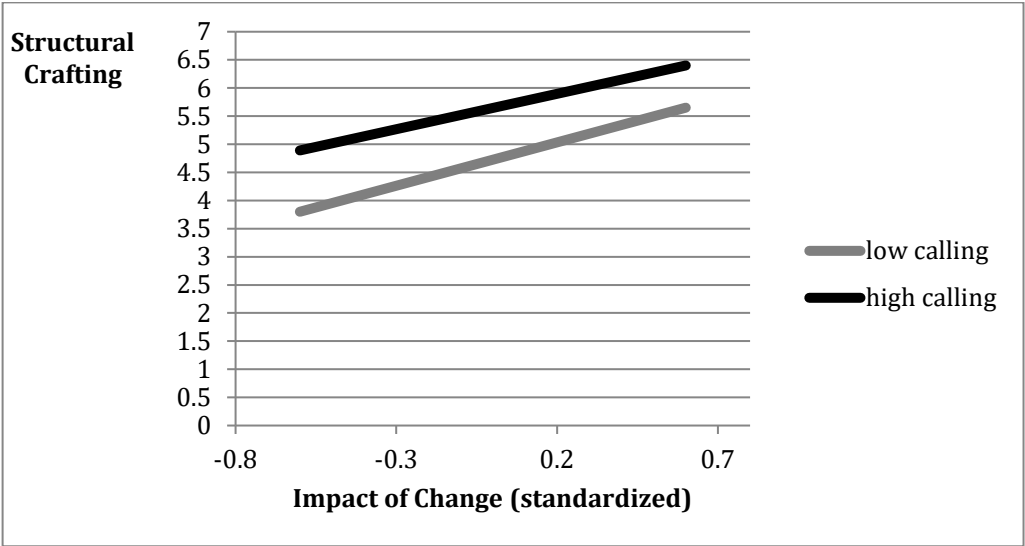


Figure 3: Moderating Role of Quality of Communication

